

RECEIVED  
CENTRAL FAX CENTER

JUL 05 2007

**II. AMENDMENT TO THE CLAIMS:**

Prior claims 1 and 6 were cancelled in a previous amendment. Please cancel presently pending claims 2-4 and 7-20 and add new claims 21- 32. The present status of the claims is as follows:

TURK, Daniel J. and AKUZAWA, Kenji; Serial Number: 10/616,140; *WHITE BODY MODELING AND VIRTUAL EVALUATION SYSTEM ...*  
AMENDMENT AND RESPONSE TO THE OFFICE COMMUNICATION MAILED ON JANUARY 5, 2007  
[REQUEST FOR CONTINUED EXAMINATION]

PAGE 2 OF 11 PAGES

COLUMBUS/1378240 v 01

RECEIVED  
CENTRAL FAX CENTER

JUL 05 2007

**Claims 1-20:** (cancelled)

**Claim 21:** (new) A system integrating white body information from disparate sources involved in the development of a mechanical assembly comprising:

disparate sources of white body information distributed among design, assembly and simulation testing members of an enterprise task group associated with a the development of a mechanical assembly;

a plurality of work stations associated with each of the disparate sources of information distributed among the design, assembly and simulation testing members of the task group;

data files and program functions stored in a retrievable format assembled in one or more lists associated with 1) defining a model of a mechanical assembly to be simulated; 2) specifying parts of the mechanical assembly, characteristics of the parts, connections capable of use with the parts, and characteristics of the connections; and 3) compiling the parts, connections and characteristics in a simulation model; the data files and program functions being accessible by a task group member from a work station;

a network linking the work stations;

one or more menu accessible at a work station associated with the lists for 1) selecting a plurality of parts to be conjoined in a simulation model from the parts in the list; 2) retrieving the data files associated with the parts selected; 3) associating the selected parts and the characteristics of the parts retrieved; 4) selecting a connection;

TURK, Daniel J. and AKUZAWA, Kenji; Serial Number: 10/616,140; *WHITE BODY MODELING AND VIRTUAL EVALUATION SYSTEM ...*  
AMENDMENT AND RESPONSE TO THE OFFICE COMMUNICATION MAILED ON JANUARY 5, 2007  
[REQUEST FOR CONTINUED EXAMINATION]

PAGE 3 OF 11 PAGES

COLUMBUS/1378240 v.01

5) retrieving the data files from the library associated with the connection selected; 6) associating the characteristics of the connection selected with selected parts in a simulation model wherein the selected parts are to be conjoined by the selected connection; 7) processing the selected parts through a mesh process; 8) saving the assembly mesh data in a database; 9) building the simulation model by associating mesh data with connection data; 10) translating the assembly so built into a virtual simulation format data record; 11) performing a virtual simulation of the mechanical assembly; 12) recording a data record of the characteristics of the simulation model in the virtual simulation; and 13) recording the data record of the simulation model and the characteristics of the simulation model determined upon the performance of a virtual simulation as an item associated with a list such that the data record of the simulation model and the characteristics of the virtual simulation of the model become available for selection and retrieval from a list as a discrete data file records of mesh, assembly, and evaluation characteristics of the simulation model accessible at the work stations.

**Claim 22:** (new) The system of claim 21 further including a continually updated data loop interconnected with a central library whereby a data file record of the characteristics of the simulation model and the virtual simulation performed upon the simulation model are maintained such that the data file record of the simulation model and the characteristics of the virtual simulation supplant any previous data file record associated with the simulation model and the characteristics of the virtual simulation.

TURK, Daniel J. and AKUZAWA, Kenji; Serial Number: 10/616,140; *WHITE BODY MODELING AND VIRTUAL EVALUATION SYSTEM ...*  
AMENDMENT AND RESPONSE TO THE OFFICE COMMUNICATION MAILED ON JANUARY 5, 2007  
[REQUEST FOR CONTINUED EXAMINATION]

PAGE 4 OF 11 PAGES

COLUMBUS/117240 v.01

**Claim 23:** (new) The system of claim 22 wherein the data file record of the simulation model includes data concerning crash impact, durability and noise characteristics of the simulation model retrievable at the work stations of the members of the task group associated in an enterprise development of a mechanical assembly.

**Claim 24:** (new) The system of claim 21 in which selectable data files in the list relating to connections include welds, bonds, bolts, sealers, adhesives, pin joints and ball joints.

**Claim 25:** (new) The system of claim 21 wherein a menu associated with the work stations includes a program function associated with a mesh part database for identifying simulation models in the groups of existing models and probable developments whereby a simulation model identified among the models in the groups may be selected.

**Claim 26:** (new) The system of claim 22 wherein a work station includes a limited menu restricting access of the work station to one or more combined functions selected from the group of: 1) selecting a plurality of parts and retrieving the data files associated with the parts selected; 2) associating with the mechanical assembly the selected parts and the characteristics of the parts retrieved; 3) selecting a connection and retrieving the data files from the library associated with the connection; 4) associating the

TURK, Daniel J. and AKUZAWA, Kenji; Serial Number: 10/616,140; *WHITE BODY MODELING AND VIRTUAL EVALUATION SYSTEM ...*  
AMENDMENT AND RESPONSE TO THE OFFICE COMMUNICATION MAILED ON JANUARY 3, 2007  
[REQUEST FOR CONTINUED EXAMINATION]

PAGE 5 OF 11 PAGES

COLLIMBUS/1378240 v.01

characteristics of the connection selected with selected parts in a simulation model in which the selected parts are to be conjoined and processing the associated connections and parts through a mesh process; 5) saving the mesh process data in a database, building the mechanical assembly and translating the assembly into a virtual simulation format data record; 6) performing a virtual simulation of the simulation model, recording a data record of the characteristics of the simulation; and compiling the data record of the simulation model and the characteristics of the virtual simulation in a format retrievable from a list.

**Claim 27:** (new) The system of claim 21 wherein the lists are maintained in a central master file database that includes parts data records associated with CAD data, mesh data, connection data, assembly data, stock data, and evaluation data.

**Claim 28:** (new) The system of claim 21 wherein the work stations associated in the network are singly identifiable with task group members separately involved in design, assembly and simulation testing of a designated simulation model.

**Claim 29:** (new) A continuous loop data management system for designing, assembling and simulating a mechanical model in a virtual format from the beginning of a design process to the end of a design process for a designated mechanical assembly comprising:

TURK, Daniel J. and AKUZAWA, Kenji; Serial Number: 10/616,140; *WHITE BODY MODELING AND VIRTUAL EVALUATION SYSTEM ...*  
AMENDMENT AND RESPONSE TO THE OFFICE COMMUNICATION MAILED ON JANUARY 5, 2007  
[REQUEST FOR CONTINUED EXAMINATION]

PAGE 6 OF 11 PAGES

COLUMBUS/1378340 v.01

a library maintained in a central master file database that includes parts data records. CAD data, mesh data, connection data, assembly data, stock data, and evaluation data;

a plurality of work stations interconnected with the library in a network wherein the work stations are singly identifiable with task group members separately involved in functions related to the design, assembly and simulation testing of the designated mechanical assembly;

a limited menu at each work station restricting a member's access to a work station to one or more functions selected from the groups of design, assembly and simulation, the functions comprising: 1) selecting a plurality of parts and retrieving the data files associated with the selected parts from the library; 2) associating the selected parts and the characteristics of the parts retrieved with the mechanical assembly; 3) selecting a connection from the library and retrieving the data files from the library associated with the connection; 4) associating the characteristics of the connection selected with the selected parts that are to be conjoined in a model and processing the associated connection and parts through a mesh process to provide an assembly mesh; 5) saving data associated with the assembly mesh in a database, building the model and translating the model into a virtual simulation format data record; 6) performing a virtual simulation of the model, recording a data record of the characteristics of the simulation and returning the data record of the model and the characteristics of the virtual simulation of the model to the library;

TURK, Daniel J. and AKUZAWA, Kenji; Serial Number: 10/616,140; *WHITE BODY MODELING AND VIRTUAL EVALUATION SYSTEM ...*  
AMENDMENT AND RESPONSE TO THE OFFICE COMMUNICATION MAILED ON JANUARY 5, 2007  
[REQUEST FOR CONTINUED EXAMINATION]

PAGE 7 OF 11 PAGES

COLLIMDUS/1376340 v.01

whereby upon the return of a data file record of the characteristics of the model processed in accordance with one or more of the selected functions, the data file record of the model as processed supplants any previous data file record in the library associated with the model corresponding to the designated mechanical assembly.

**Claim 30:** (new) The system of claim 29 wherein after a simulation of the model approved by one or more member of the task group, the design and assembly characteristics of the model are fixed as a final design of the designated mechanical assembly in the library.

**Claim 31:** (new) The system of claim 21 wherein, in the process of building the assembly by associating mesh data with connection data relating to the manner in which conjoined parts are welded in the assembly, imperfections in the mesh are identified and fixed.

**Claim 32:** (new) The system of claim 31 wherein, in the process of building the assembly by associating mesh data with connection data relating to the manner in which conjoined parts are welded in the assembly, imperfections in the mesh are identified and fixed.

TURK, Daniel J. and AKUZAWA, Kenji; Serial Number: 10/616,140; *WHITE BODY MODELING AND VIRTUAL EVALUATION SYSTEM ...*  
AMENDMENT AND RESPONSE TO THE OFFICE COMMUNICATION MAILED ON JANUARY 5, 2007  
[REQUEST FOR CONTINUED EXAMINATION]

PAGE 8 OF 11 PAGES

COLUMBIA/1378240 v.01